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DEPARTMENT OF THE NAVY
JUSTIFICATION OF ESTIMATES
FOR FISCAL YEARS 1988 AND 1989



SUBMITTED TO CONGRESS JANUARY 1987

PROCUREMENT

WEAPONS PROCUREMENT, NAVY

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JUSTIFICATION OF ESTIMATES FOR FISCAL YEAR 1988 AND 1989

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QUALITY INSPECTED

WEAPONS PROCUREMENT, NAVY

For construction, procurement, production, modification, and modernization of missiles, torpedoes, other weapons, and related support equipment including spare parts, and accessories therefor; expansion of public and private plants, including the land necessary therefor, and such lands and interests therein. may be acquired, and construction prosecuted thereon prior to approval of title; and procurement and installation of equipment, appliances, and machine tools in public and private plants; reserve plant and Government and contractor-owned equipment layaway, as follows: Poseidon, \$3,974,000; Trident I, \$4,739,000; Trident II, \$1,362,439,000; Poseidon modifications, \$95,000; Support equipment and facilities, \$3,790,000; Tomahawk, \$723,800,000; AIM/RIM-7 F/M Sparrow, \$269,394,000; AIM-9 L/M Sidewinder, \$35,800,000; AIM-54 A/C Phoenix, \$267,272,000; AIM-54 A/C Phoenix advance procurement, \$20,000,000; AGM-84A Harpoon, \$123,000,000; AGM-88A HARM, \$256,682,000; SM-2 MR, \$478,611,000; SM-2 ER, \$217,017,000; RAM, \$40,000,000; Stinger, \$39,740,000; Sldarm, \$22,858,000; Laser Maverick, \$165,691,000; IIR Maverick, \$35,200,000; Aerial Targets, \$96,000,000; Drones and decoys, \$36,136,000; Other missile support, \$22,017,000; Modification of missiles, \$13,692,000; Support equipment and facilities, \$74,803,000; Ordnance Support equipment, \$79,192,000; MK-48 ADCAP torpedo program, \$254,770,000; MK-46 torpedo program, \$97,861,000; MK-50 ALWT torpedo program, \$68,137,000; Antisubmarine rocket (ASROC) program, \$13,597,000; Vertical Launched ASROC, \$74,289,000; Modification of torpedoes, \$97,705,000; Torpedo support equipment program, \$52,610,000; MK-15 Close-In Weapons System program, \$105,606,000; MK-75 gun mount program \$14,875,000; MK-19 machine gun program, \$632,000; 25mm gun mount, \$3,919,000; Small arms and weapons, \$10,082,000; Modification of guns and gun mounts, \$57,215,000; Guns and gun mounts support equipment program, \$873,000; Spares and repair parts, \$150,734,000; in all: \$5,290,847,000; \$6,502,332,000, of which \$4,183,000 shall be available only for the Navy Reserve and the Marine Corps Reserve, to remain available for obligation until September 30, [1989: Provided, That within the total amount appropriated, the subdivisions within this appropriation shall be reduced by \$104,000,000] 1990.

Further, for the foregoing purposes, \$7,852,931,000, of which \$4,062,000 shall be available only for the Navy Reserve and the Marine Corps Reserve, to become available for obligation on October 1, 1988 and to remain available for obligation until September 30, 1991. (10 U.S.C. 5013, 5063, 7201; Department of Defense Appropriation Act, 1987, as included in Public Laws 99-500 and 99-591, section 101(c); additional authorizing legislation to be proposed.)

Weapons Procurement, Navy
Program and Financing (in thousands of dollars) SUMMARY 05 Jan 87

Identification code	17-1507-0-1-051	Budget plan (amounts for PROCUREMENT actions programmed)				Obligations			
		1986 actual	1987 est.	1988 est.	1989 est.	1986 actual	1987 est.	1988 est.	1989 est.
Program by activities:									
Direct program:									
00 0101	Ballistic missiles	547,940	1,359,073	2,258,692	2,237,473	549,901	1,230,960	2,007,466	2,222,054
00 0201	Other missiles	3,131,983	2,968,006	3,377,987	4,387,721	3,245,357	2,507,661	3,206,438	3,836,953
00 0301	Torpedoes and related equipment	722,670	606,270	634,385	970,341	429,367	940,176	544,827	875,538
00 0401	Other weapons	205,674	186,721	101,540	103,669	156,848	224,279	120,605	153,471
00 0501	Spare and repair parts	148,771	148,771	129,728	143,727	83,720	182,073	136,532	146,519
00 9101	Total direct program	4,756,438	5,265,847	6,502,332	7,852,931	4,469,193	5,085,089	6,014,969	7,232,537
01 0101	Reimbursable program	27,491	31,000	31,930	32,888	20,694	41,061	31,930	32,888
10 0001	Total	4,783,929	5,296,847	6,534,262	7,885,819	4,489,887	5,126,150	6,046,899	7,265,425
Financing:									
Offsetting collections from:									
11 0001	Federal funds(-)	-1,497	-29,000	-29,870	-30,766	-927	-29,000	-29,870	-30,766
13 0001	Trust funds(-)	-25,964	-2,000	-2,060	-2,122	-22,413	-2,000	-2,060	-2,122
14 0001	Non-Federal sources(-)	-30				-3,020			
17 0001	Recovery of prior year obligations								
21 4002	Unobligated balance available, start of year:								
21 4003	For completion of prior year budget plans								
21 4004	Available to finance new budget plans	-54,000	-274,700			-2,098,824	-2,171,379	-2,422,876	-2,910,239
21 4005	Reprogramming from/to prior year budget plans	-221,387	80,800			-54,000	-50,700		
22 4001	Unobligated balance transferred to other accounts	99,265	-50,700			99,265	-50,700		
23 4001	Unobligated balance rescinded: Appropriation		244,600				244,600		
23 4002	Reduction pursuant to P.L. 96-177 in unob bal: Apr	105,126				105,126			
24 4002	Unobligated balance available, end of year:								
24 4003	For completion of prior year budget plans	274,700				2,171,379	2,422,876	2,910,239	3,530,633
25 0001	Unobligated balance lapsing	11,496				274,700			
39 0001	Budget authority	4,971,638	5,265,847	6,502,332	7,852,931	4,971,638	5,265,847	6,502,332	7,852,931
Budget authority:									
40 0001	Appropriation	4,971,638	5,290,847	6,502,332	7,852,931	4,971,638	5,290,847	6,502,332	7,852,931
41 0001	Transferred to other accounts(-)		-25,000			-25,000			
43 0001	Appropriation (adjusted)	4,971,638	5,265,847	6,502,332	7,852,931	4,971,638	5,265,847	6,502,332	7,852,931
Relation of obligations to outlays:									
71 0001	Obligations incurred, net					4,465,516	5,095,150	6,014,969	7,232,537
72 4001	Obligated balance, start of year					5,155,924	6,136,382	7,158,032	8,612,101
74 4001	Obligated balance, end of year					-6,136,382	-7,158,032	-8,612,101	-10,476,338
77 0001	Adjustments in expired accounts					-7,245			
78 0001	Adjustments in unexpired accounts					-3,020			
10 0001	Outlays					3,474,792	4,073,500	4,560,900	5,368,300

Weapons Procurement, Navy
Object Classification (in Thousands of dollars) SUMMARY

05 Jan 87

Identification code	17-1507-0-1-051	1986 actual	1987 est.	1988 est.	1989 est.
Direct obligations:					
Other services:					
5.003 Contracts		121,118	138,287	165,376	198,600
5.004 Other		121,118			
6.001 Supplies and materials		3,777,371	4,680,714	5,542,131	6,666,161
11.001 Equipment		448,586	256,088	307,482	367,776
19.001 Total Direct obligations		4,468,193	5,085,089	6,014,989	7,232,537
Reimbursable obligations:					
6.001 Supplies and materials		20,694	41,061	31,930	32,888
19.001 Total Reimbursable obligations		20,694	41,061	31,930	32,888
19.901 Total obligations		4,488,887	5,126,150	6,046,899	7,265,425

Weapons Procurement, Navy
Program and Financing (in thousands of dollars) FISCAL YEAR 1984 05 Jan 87

Identification code	17-1507-0-1-051	Budget Plan (amounts for PROCUREMENT actions programmed)				Obligations			
		1986 actual	1987 est.	1988 est.	1989 est.	1986 actual	1987 est.	1988 est.	1989 est.
Program by activities:									
Direct program:									
00.0101	Ballistic missiles					43,975			
00.0201	Other missiles					321,259			
00.0301	Torpedoes and related equipment					73,768			
00.0401	Other weapons					10,997			
00.9101	Total direct program					449,999			
01.0101	Reimbursable program					1,924			
10.0001	Total					451,923			
Financing:									
Offsetting collections from:									
11.0001	Federal funds(-)					-3,086			
13.0001	Trust funds(-)					7,083			
14.0001	Non-Federal sources(-)					3			
17.0001	Recovery of prior year obligations					-1,836			
21.4002	Unobligated balance available, start of year:					-537,576			
21.4003	Unobligated balance available, prior year:								
21.4007	Reprogramming from prior year budget plans	-83,489							
22.4001	Unobligated balance transferred to other accounts	46,000				46,000			
23.4002	Reduction pursuant to P.L. 99-177 in unob bal: Apr	25,993				25,993			
25.0001	Unobligated balance lapsing	11,496				11,496			
39.0001	Budget authority								

05 Jan 87

Weapons Procurement, Navy
Program and Financing (in thousands of dollars) FISCAL YEAR 1985

Identification code	17-1507-0-1-051	Budget plan (amounts for PROCUREMENT actions programmed)				Obligations	
		1986 actual	1987 est.	1988 est.	1989 est.	1986 actual	1987 est.
Program by activities:							
Direct program:							
00 0101	Ballistic missiles					59,100	42,623
00 0201	Other missiles					604,751	486,886
00 0301	Torpedoes and related equipment					149,798	68,833
00 0401	Other weapons					38,016	43,067
00 9101	Total direct program					852,665	651,209
01 0101	Reimbursable program					832	708
10 0001	Total					853,297	651,917
Financing:							
Offsetting collections from:							
11 0001	Federal funds(-)					3,656	
13 0001	Trust funds(-)					-3,532	
14 0001	Non-Federal sources(-)					-4	
17 0001	Recovery of prior year obligations					-1,184	
21 4002	Unobligated balance available, start of year:					-1,561,248	-571,117
21 4003	For completion of prior year budget plans					-54,000	-59,500
22 4001	Available to finance new budget plans					80,000	
22 4002	Reprogramming from/to prior year budget plans					-137,998	
22 4003	Unobligated balance transferred to other accounts					53,265	
23 4001	Unobligated balance rescinded: Appropriation					59,500	
23 4002	Reduction pursuant to P.L. 99-177 in unob bal: Apn					79,133	
24 4001	Unobligated balance available, end of year:					571,117	
24 4002	For completion of prior year budget plans					59,500	
24 4003	Available to finance subsequent year budget plans						
39 0001	Budget authority						

Weapons Procurement, Navy
Program and Financing (in thousands of dollars) FISCAL YEAR 1986 05 Jan 87

Identification code	17-1507-0-1-051	Budget Plan (amounts for PROCUREMENT actions program)				Obligations			
		1986 actual	1987 est.	1988 est.	1989 est.	1986 actual	1987 est.	1988 est.	1989 est.
Program by activities:									
Direct program:									
00.0101	Ballistic missiles	547,940				446,826	80,000		
00.0201	Other missiles	3,131,983				2,322,347	438,262	21,114	
00.0301	Torpedoes and related equipment	722,870				204,801	74,782	499,374	
00.0401	Other weapons	205,674				108,835	65,451	79,403	
00.0501	Spare and repair parts	148,171				42,720	65,451	22,057	
00.9101	Total direct program	4,756,438				3,165,529	968,961	621,948	
01.0101	Reimbursable program	27,491				16,138	9,353		
10.0001	Total	4,783,929				3,183,667	978,314	621,948	
Financing:									
Offsetting collections from:									
11.0001	Federal funds(-)	-1,497				-1,497			
13.0001	Trust funds(-)	-25,964				-25,964			
14.0001	Non-Federal sources(-)	-30				-30			
21.4002	Unobligated balance available, start of year:								
21.4003	Available to finance new budget plans								
22.4001	Unobligated balance transferred to other accounts								
22.4002	Unobligated balance resciended: Appropriation								
22.4003	Unobligated balance available, end of year:								
23.4001	For completion of prior year budget plans								
24.4002	Available to finance subsequent year budget plans								
24.4003	Budget authority (Appropriation)	215,200				1,600,262	621,948	-621,948	
40.0001	Total	4,971,638				4,971,638			

Program Weapons Procurement, Navy
and Financing (in thousands of dollars) FISCAL YEAR 1987 05 Jan 87

Identification code	17-1507-0-1-051	Budget Plan (amounts for PROCUREMENT actions programmed)				Obligations			
		1986 actual	1987 est.	1988 est.	1989 est.	1986 actual	1987 est.	1988 est.	1989 est.
Program by activities:									
Direct program:									
00 0101	Ballistic missiles		1,359,073				1,108,277	142,070	108,726
00 0201	Other missiles		2,988,006				1,700,513	810,312	457,181
00 0301	Torpedoes and related equipment		606,270				433,077	82,253	90,940
00 0401	Other weapons		186,721				106,430	48,548	31,743
00 0501	Sparas and repair parts		145,777				116,622	28,155	
00 9101	Total direct program		5,265,847				3,464,919	1,112,338	688,590
01 0101	Reimbursable program		31,000				31,000		
10 0001	Total		5,296,847				3,495,919	1,112,338	688,590
Financing:									
Offsetting collections from:									
11 0001	Federal funds(-)		-29,000				-29,000		
13 0001	Trust funds(-)		-2,000				-2,000		
21 4002	Unobligated balance available, start of year:								
	for completion of prior year budget plans								
24 4002	Unobligated balance available, end of year:								
	for completion of prior year budget plans							-1,800,928	-688,590
39 0001	Budget authority		5,265,847				1,800,928	688,590	
							5,265,847		
Budget authority:									
40 0001	Appropriation		5,290,847				5,290,847		
41 0001	Transferred to other accounts(-)		-25,000				-25,000		
43 0001	Appropriation (adjusted)		5,265,847				5,265,847		

Weapons Procurement, Navy
Program and Financing (in thousands of dollars) FISCAL YEAR 1988 05 Jan 87

Identification code	17-1507-0-1-051	Budget Plan (amounts for PROCUREMENT actions programmed)				Obligations			
		1986 actual	1987 est.	1988 est.	1989 est.	1986 actual	1987 est.	1988 est.	1989 est.
Program by activities:									
Direct program:									
00.0101	Ballistic missiles			2,258,692			1,844,282	276,643	
00.0201	Other missiles			3,377,987			1,896,753	893,999	
00.0301	Torpedoes and related equipment			634,385			383,271	140,533	
00.0401	Other weapons			101,540			50,000	37,669	
00.0501	Spare and repair parts			129,728			106,377	23,351	
00.9101	Total direct program			6,502,332			4,280,683	1,372,195	
01.0101	Reimbursable program			31,930			31,930		
10.0001	Total			6,534,262			4,312,613	1,372,195	
Financing:									
Offsetting collections from:									
11.0001	Federal funds(-)			-29,870			-29,870		
13.0001	Trust funds(-)			-2,060			-2,060		
21.4002	Unobligated balance available, start of year:								
	For completion of prior year budget plans							-2,221,649	
24.4002	Unobligated balance available, end of year:								
	For completion of prior year budget plans						2,221,649	849,454	
40.0001	Budget authority (Appropriation)			6,502,332			6,502,332		

Weapons Procurement, Navy
Program and Financing (in thousands of dollars) FISCAL YEAR 1989

05 Jan 87

Identification code	17-1507-0-1-051	Budget Plan (amounts for PROCUREMENT actions programmed)				Obligations			
		1986 actual	1987 est.	1988 est.	1989 est.	1986 actual	1987 est.	1988 est.	1989 est.
Program by activities:									
Direct program:									
00 0101	Ballistic missiles				2,237,473				1,836,687
00 0201	Other missiles				4,397,721				2,484,773
00 0301	Torpedoes and related equipment				970,341				644,065
00 0401	Other weapons				103,669				84,059
00 0501	Spares and repair parts				143,727				122,168
00 9101	Total direct program				7,852,931				5,171,752
01 0101	Reimbursable program				32,888				32,888
10 0001	Total				7,885,819				5,204,640
Financing:									
Offsetting collections from:									
11 0001	Federal funds(-)				-30,766				-30,766
13 0001	Trust funds(-)				-2,122				-2,122
24 4002	Unobligated balance available, end of year:								
	For completion of prior year budget plans								2,681,179
40 0001	Budget authority (appropriation)				7,852,931				7,852,931

Summary of Requirements
(In Thousands of Dollars)

	<u>FY 1986 Actual</u>	<u>FY 1987 Estimate</u>	<u>FY 1988 Estimate</u>	<u>FY 1989 Estimate</u>
Ballistic Missiles	547,940	1,359,073	2,258,692	2,237,473
Other Missiles	3,131,983	2,968,006	3,377,987	4,397,721
Torpedoes and Related Equipment	722,670	606,270	634,385	970,341
Other Weapons	205,674	186,721	101,540	103,669
Spares and Repair Parts	148,171	145,777	129,728	143,727
<hr/>				
TOTAL Direct Program	4,756,438	5,265,847	6,502,332	7,852,931
Reimbursable Program	27,491	31,000	31,930	32,888
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TOTAL Program Requirements	4,783,929	5,296,847	6,534,262	7,885,819

BUDGET ACTIVITY 1: BALLISTIC MISSILES

(\\$ in thousands)
FY 1989 Estimate - \$2,237,473
FY 1988 Estimate - \$2,258,692
FY 1987 Estimate - \$1,359,073
FY 1986 Actuals - \$ 547,940

Purpose and Scope of Work: These funds provide for the procurement of fleet ballistic missiles, ancillary checkout and test equipment, missile modifications, and support equipment and facilities required to outfit and support the submarines assigned to the seabased strategic deterrent forces.

Justification of Funds: Of the \$2,258.7 million requested in FY 1988, \$2,258.5 million is for ballistic missiles, and \$0.2 million is for support equipment and facilities.

Of the \$2,237.5 million requested in FY 1989, \$2,234.9 million is for ballistic missiles, and \$2.6 million is for support equipment and facilities.

BALLISTIC MISSILES

(\\$ in thousands)
FY 1989 Estimate - \$2,234,849
FY 1988 Estimate - \$2,258,498
FY 1987 Estimate - \$1,355,316
FY 1986 Actuals - \$ 537,401

Of the \$2,258.5 million requested for ballistic missiles in FY 1988, \$0.2 million is for POSEIDON, \$7.0 million is for TRIDENT I, \$1,931.3 million is for TRIDENT II, and \$320.0 million is for TRIDENT II Advance Procurement.

Of the \$2,234.9 million requested for ballistic missiles in FY 1989, \$0.2 million is for POSEIDON, \$7.6 million is for TRIDENT I, \$1,966.9 million is for TRIDENT II, and \$260.2 million is for TRIDENT II Advance Procurement.

POSEIDON Missile

(\$ in thousands)			
FY 1988		FY 1989	
Qty	Amount	Qty	Amount
-	\$181	-	\$187

Procurement Cost

To maintain the effectiveness of the Fleet Ballistic Missile System against postulated enemy defensive capabilities of the next decade, the Navy was directed in FY 1966 to develop and deploy the POSEIDON weapon system. The principal advantage of the POSEIDON over its predecessor, the POLARIS, is its adaptability to overcome a broad spectrum of defenses, as they may materialize from Soviet Anti-Submarine Warfare (ASW) and Anti-Ballistic Missile (ABM) development programs. POSEIDON missiles are no longer being procured; however, funding is required to support missile flight tests which will continue throughout the operational life of the weapon system. This testing is necessary to evaluate the readiness of deployed missiles in accordance with Joint Chiefs of Staff test criteria.

The FY 1988 and FY 1989 funding requests will procure MK-3 reentry system components whose limited operational life requires their periodic replacement by the Department of Energy under the Limited Life Component Exchange Program.

TRIDENT I Missile

(\$ in thousands)			
FY 1988		FY 1989	
Qty	Amount	Qty	Amount
-	\$6,986	-	\$7,564

Procurement Cost

The TRIDENT mission is to provide an undersea missile system in order to ensure that the U.S. continues to maintain a credible deterrent independent of foreseeable threats in the 1990's and beyond. To accomplish this mission, the TRIDENT I missile was developed to support two separate systems. The TRIDENT I system is comprised of Continental United States based nuclear powered submarines equipped with long range TRIDENT I strategic missiles and associated direct support shore facilities. The TRIDENT I Backfit system provides TRIDENT I missiles for backfit into existing POSEIDON submarines, thereby providing these submarines a greater range of patrol in order to insure their survivability in the event of unforeseeable enemy breakthroughs in ASW capabilities.

Within the current TRIDENT I missile program of 570 missiles procured between FY 1977 and FY 1984, missile production deliveries were scheduled at quantities necessary to maintain quality and a smooth production rate and to provide for repair submarine requirements, replacement of missiles returned from the fleet for repair and surveillance, and expenditures during demonstration firings and operational tests. Based on current program guidance, TRIDENT I missile procurements will support the ultimate deployment of eight TRIDENT submarines, twelve Backfit submarines and additional missiles to continue the Fleet Return and Evaluation Program (FREP) and DASO/FOT programs. Although FY 1984 marked the final year of TRIDENT I missile procurement, funding is required in subsequent years for acquisition of MK-5 guidance system components and for equipment procurement the associated with the C-4 flight test program, which will continue throughout the operational life of the weapon system. This testing is essential to evaluate the readiness of deployed missiles in accordance with Joint Chiefs of Staff test criteria.

The FY 1988 and FY 1989 TRIDENT I missile requests of \$7.0 million and \$7.6 million respectively will provide for procurements essential to the continued support of MK-5 guidance and MK-4 reentry systems.

TRIDENT II MISSILE

(\$ in thousands)		
	FY 1988	FY 1989
	Qty	Qty
	Amount	Amount
	66	66
	\$1,931,344	\$1,966,858
Procurement Cost		

The TRIDENT II missile will be carried on TRIDENT Fleet Ballistic Missile Submarines, ensuring that the United States will continue to maintain a highly survivable strategic deterrent for the 1990's and beyond. Deployment of the TRIDENT II missile will (1) enhance Fleet Ballistic Missile Submarine survivability by increasing Sea Launched Ballistic Missile range at full payload to exploit the total patrol area available to the TRIDENT submarine, (2) minimize total weapon system costs by increasing Sea Launched Ballistic Missile payload to the level permitted by the size of the TRIDENT submarine launch tube, thereby allowing mission capability to be achieved with a lesser number of submarines, (3) balance the Triad by adding efficient hard target kill capability to the Sea Launched Ballistic Missile, and (4) enhance essential equivalence with the Soviets in accordance with perceived needs to increase our warhead inventory, throw weight, and accuracy in the presence of increasing Soviet capabilities and force levels.

Funding in this line is required to support the procurement of an all new TRIDENT II missile, initial production of which commences in FY 1987 and to which the following key program milestones apply:

- TRIDENT II missile Initial Operational Capability (IOC) - December 1989
- First Performance Evaluation Missile (PEM) flight test - March 1989
- Start PEM missile processing at Strategic Weapons Facility, Atlantic (SWFLANT) - July 1988
- SWFLANT installation, test, checkout and equipment/facility integration beginning in FY 1987
- Equipment procurements in FY 1986 through FY 1989 based on leadtime away requirements

The FY 1988 funding request of \$1,931.3 million will support the first full year's production of 66 TRIDENT II missiles; production of associated guidance and flight test instrumentation systems; procurement of MK-4 and MK-5 reentry systems; and SWFLANT production planning, activation, and initial equipment outfitting essential to establishing a TRIDENT II missile processing capability. The FY 1989 funding request of \$1,966.9 million will support production of an additional 66 TRIDENT II missiles; production of associated guidance and flight test instrumentation systems; procurement of MK-4 and MK-5 reentry systems; additional SWFLANT production planning, activation, and initial equipment outfitting; and planning, activation, and initial equipment outfitting required to establish a TRIDENT II missile processing capability at the Strategic Weapons Facility, Pacific (SWFPAC).

TRIDENT II Missile Advance Procurement

	(\$ in thousands)	
	FY 1988	FY 1989
	<u>Amount</u>	<u>Amount</u>
Advance Procurement Cost	\$319,987	\$260,240

Funding in this line is required to support the advance procurement of those commodities, components, subassemblies and materials having longer manufacturing leadtimes than the using TRIDENT II end items. Advance procurement requirements for these long lead commodities are budgeted one year in advance of the using end items, which are fully funded in the procurement line, and funding levels are established commensurate with the quantity of end items to be procured.

The FY 1988 request of \$320.0 million and the FY 1989 request of \$260.2 million will provide for procurement of long lead items required to support production in FY 1989 and FY 1990 respectively of TRIDENT II missiles, MK-6 guidance systems, and special purpose instrumentation used in the TRIDENT II flight test program.

MODIFICATION OF MISSILES

(\$ in thousands)
FY 1989 Estimate - \$ -0-
FY 1988 Estimate - \$ -0-
FY 1987 Estimate - \$ 92
FY 1986 Actuals - \$ -0-

Requirements for POSEIDON missile alterations (SPALTS) are determined only after thorough investigation has established the need for a change in system or equipment configuration, the total estimated cost and the impact of the proposed change have been defined, and the proposal has been subjected to intense screening to determine a positive advantage to the system. POSEIDON SPALTS are funded only when correction of a known deficiency is required, a component is no longer procurable in its original configuration, or it is necessary to accept a substitute part of an existing subassembly.

SUPPORT EQUIPMENT AND FACILITIES

(\$ in thousands)
FY 1989 Estimate - \$ 2,624
FY 1988 Estimate - \$ 194
FY 1987 Estimate - \$ 3,665
FY 1986 Actuals - \$10,539

The support equipment and facilities requests provide for the procurement of missile industrial facilities.

Missile Industrial Facilities

	(\$ in thousands)	
Procurement Cost	FY 1988	FY 1989
	Amount	Amount
	\$ 194	\$2,624

Funding for Missile Industrial Facilities provides for capital maintenance projects at Navy-owned Naval Industrial Reserve Ordnance Plants (NIROPS) at Sunnyvale and Santa Cruz, California and Bacchus, Utah in support of the Fleet Ballistic Missile program.

Projects planned in FY 1988 and FY 1989 include additions and modifications to, and rehabilitation of, civil works, non-severable equipment, and real property. Among those projects which are generated as a result of government mandated energy conservation and environmental protection laws and by safety and security considerations are the following: converting street lights to low pressure sodium, refurbishing fume ducts and vent fans, refurbishing fire sprinkler trees, and repairing and replacing perimeter fencing.

Budget Activity 2: Other Missiles

(\$ in Thousands)
FY 1989 Estimate - \$ 4,397,721
FY 1988 Estimate - \$ 3,377,987
FY 1987 Estimate - \$ 2,968,006
FY 1986 Actual - \$ 3,131,983

Purpose and Scope of Work

Funds budgeted under this activity finance the procurement and modification of strategic and tactical guided missiles, drones and decoys, and aerial targets. In addition, funds provide for other missile support, ordnance support equipment, weapons industrial facilities and for the support of satellites, launches, and associated equipment for the Fleet Satellite Communication system and the Defense Meteorological Satellite program.

Guided missiles are procured for operational inventory requirements to meet combat sustainability objectives, combat usage, quality assurance testing, and training purposes. Aerial targets are required to support training programs and to permit evaluation of missile performance. Drones and decoys are procured to improve the survivability of Navy aircraft, and to provide gunfire support and essential relays in tactical situations. Procurement funds provide for (1) the components that comprise the end-items, such as guidance, control, motors, warheads, and fuzes, (2) effort and hardware associated with the production and assembly of these items, such as production engineering, production proofing, tools and test equipment, and (3) special handling and test equipment, training materials and other specialized items required for operational Fleet support of the item.

Justification of Funds

The Chief of Naval Operations establishes operational and training objectives consistent with the Navy's assigned role in national defense. These objectives are translated into annual procurement programs in accordance with logistics guidance set forth by the Secretary of Defense, taking into account available fiscal resources. The resultant procurement plan is designed to maintain an effective mix of weapons in the combat inventory, and to provide weapons and targets in support of training, evaluation, and pipeline requirements. In developing the plan, the Navy considers production feasibility and assures that missile deliveries are compatible with aircraft and ship testing, production, development, and deployment schedules.

The following paragraphs provide justification for the Other Missiles procurement programs. Initial spare parts amounts are included for information under each missile but are separately addressed in the spares and repair parts category of the Budget Activity 5 justification.

Strategic Missiles

(\$ in Thousands)
FY 1989 Estimate - \$1,029,686
FY 1988 Estimate - \$ 993,942
FY 1987 Estimate - \$ 717,627
FY 1986 Actual - \$ 649,364

BGM-109 TOMAHAWK Cruise Missile

	FY 1988		FY 1989	
	Qty	Amt	Qty	Amt
Procurement	475	\$ 915,936	410	\$ 941,078
Advance Procurement		78,006		88,608
Initial Spares		21,574		27,234
Procurement Cost		\$1,015,516		\$1,056,920

The TOMAHAWK cruise missile provides an attack capability against targets at sea (anti-ship Tomahawk) and on land (land-attack Tomahawk). TOMAHAWK is capable of being launched from aircraft, ships, submarines, and ground launchers. The cruise missile can be fitted with either a conventional high explosive or nuclear warhead, and is propelled in flight by a small turbofan engine. The FY 1988 request of \$993.9 million, which includes \$78.0 million of advance procurement for FY 1989, will procure 80 anti-ship and 395 land attack missiles. The FY 1989 request of \$1,029.7 million, which includes \$88.6 million of advance procurement for FY 1990, will procure 75 anti-ship and 435 land attack missiles. The Tomahawk missile is designed to be deployed in submarines and surface ships in a variety of launchers.

Tactical Missiles

(\$ in Thousands)
FY 1989 Estimate - \$2,519,692
FY 1988 Estimate - \$1,910,689
FY 1987 Estimate - \$2,088,499
FY 1986 Actual - \$2,348,180

Funds budgeted under this category finance the procurement of air-, surface-, and submarine-launched missiles, other missile support, aerial targets, and drones and decoys.

AIM-120A AMRAAM

(\$ in Thousands)			
FY 1988		FY 1989	
Qty	Amt	Qty	Amt
Procurement	\$ -	50	\$ 118,364
Initial Spares	-	-	-
Procurement Cost	\$ -		\$ 118,364

The AMRAAM (Advanced Medium Range Air-to-Air Missile) missile is the successor to the SPARROW missile being procured by both the Air Force and the Navy. The Air Force serves as executive service. The missile will provide an all-weather, all-aspect, beyond-visual-range, air-to-air missile compatible with the F-14, F-15, and F-16, F/A-18, and A-6E Upgrade aircrafts. The AMRAAM missile will enhance Navy war-fighting capability in the 1990's and beyond through significant improvements in operational utility and combat effectiveness. The \$118.4 million requested in FY 1989 will provide for the initial Navy procurement of 50 AMRAAM missiles.

AIM-9L/M SIDEWINDER Missile

(\$ in Thousands)			
FY 1988		FY 1989	
Qty	Amt	Qty	Amt
Procurement	\$ 43,320	-	\$ -
Initial Spares	90	-	-
Procurement Cost	\$ 43,410		\$ -

The SIDEWINDER AIM-9L/M is a joint Navy and Air Force short-range, air-to-air, infrared (IR), dogfight missile employed by both fighter and attack aircraft. The all-aspect launch capability is a significant improvement over previous SIDEWINDER versions and greatly increases the firing envelope. The AIM-9M, a product improvement of the AIM-9L, provides for improved counter-countermeasures capability and an improved ability to acquire targets in high IR clutter background. The procurement of 1,244 guidance units (288 missiles for Navy and 956 missiles for Air Force) in FY 1988 will be competed between the two mobilization base producers, Ford Aerospace and Raytheon, with the winner being awarded a larger quantity. The \$43.3 million requested in FY 1988 will procure 288 missiles required to continue inventory build-up of the AIM-9M version and will be the first-line, short-range, air-defense missile through the 1990's. No request is submitted for FY 1989 since the Navy completes procurement of Sidewinder missiles with the FY 1988 procurement.

AIM-54A/C PHOENIX Missile

	(\$ in Thousands)			
	FY 1988	FY 1989		
	Qty	Amt	Qty	Amt
Procurement	430	\$ 397,996	560	\$ 464,969
Initial Spares		628		216
Procurement Cost		\$ 398,624		\$ 465,185

The PHOENIX missile system is comprised of a long-range, airborne weapon control system (AN/AWG-9) with multiple target-handling capabilities and long-range missiles utilizing semi-active, mid-course and active terminal guidance. Its mission is to kill multiple air targets with conventional warheads. Six such missiles can be carried aboard the F-14 aircraft. Near simultaneous launch is possible against six targets in an all-weather and heavy-jamming environment. The improved Phoenix missile, the AIM-54C, provides improved lethality, stream raid discrimination, electronic counter countermeasure (ECCM) performance, high and low altitude performance, and improved reliability and maintainability. As a result of these improvements, the missile has greater capability to counter the projected MIG-25 FOXBAT aircraft and cruise missile threats. The PHOENIX does not replace any other missile. The \$398.0 million requested in FY 1988 will finance the procurement of 430 PHOENIX missiles configured in the improved AIM-54C version including a directed procurement of 180 missiles from the second source contractor. Competitive procurement of the PHOENIX missile is scheduled to begin in FY 1989 with a request of \$465.0 million for 560 missiles. The FY 1988 and FY 1989 missiles are needed to continue to increase the number of operational PHOENIX missiles in the active inventory, and to offset the loss of older AIM-54A missiles that are expended or suffer irreparable failure.

AGM/RGM/UGM-84A/E HARPOON Missile (Multiyear Procurement)

	(\$ in Thousands)			
	FY 1988	FY 1989		
	Qty	Amt	Qty	Amt
Procurement	124	\$ 130,694	138	\$ 133,288
Advance Procurement		31,000		-
Initial Spares		10,285		5,886
Procurement Cost		\$ 171,979		\$ 139,174

The HARPOON is an air-, surface-, and submarine-launched cruise missile which provides an attack capability against targets at sea and on land. It uses an active or passive seeker, radar altimeter, and attitude reference assembly in conjunction with a small digital computer for missile guidance and control. It is propelled by a turbo-jet sustainer engine, augmented by a solid booster for ship and

submarine launch. The missile has a standard 13.5 inch diameter with a weight of 1,100 pounds for air launch and 1,500 pounds for ship launch. It is compatible with the TARTAR, TERRIER, and ASROC ship launchers as well as with aircraft and submarine launch systems. The missile is planned for use aboard the FF-1052, DDG and DD-963, CG, CGM, PHM, BB, and FFG class ships, the P-3, S-3, A-6, F/A-18, and B-52G aircraft and nuclear attack submarines. The 1988 request of \$161.7 million provides for procurement of 124 HARPOON missiles (95 air-launch anti-ship and 29 air-launch land attack missiles) and includes \$31.0 million for advance procurement in support of the FY 1988-1992 multi-year procurement. Beginning with FY 1988, a five-year multiyear contract will be awarded with anticipated savings of 10 percent for the hardware costs. The FY 1989 request of \$133.3 million will provide for 138 HARPOON missiles. These weapons are requested to ensure adequate availability of weapons as new platforms are made operational, and to offset missile expenditures consumed in training and test requirements.

AGM-88A HARM Missile

	(\$ in Thousands)			
	FY 1988		FY 1989	
	Qty	Amt	Qty	Amt
Procurement	766	\$ 194,728	1,766	\$ 404,926
Initial Spares		10,324		5,663
Procurement Cost		\$ 205,052		\$ 410,589

The High Speed Anti-Radiation Missile (HARM) is a joint Navy and Air Force air-to-surface missile designed to suppress or destroy land- and sea-based radars which support enemy air defense systems. HARM is a design evolution of anti-radiation missiles (ARM) such as SHRIKE and STANDARD ARM, and is planned to replace both missiles in the Navy inventory. HARM characteristics include: high speed, large-launch envelope, wide-band-frequency coverage in a single head, high sensitivity and compatibility with various naval aircraft. The HARM has evolved from known and predicted deficiencies in SHRIKE and STANDARD ARM missiles in defeating current and future enemy air defense systems. Initial procurement commenced in FY 1981. The FY 1988 request of \$194.7 million will procure 766 HARM missiles for the Navy. Failure to provide the requested number of missiles will seriously degrade the Navy's ability to counter the threat to aircraft and aircrews posed by enemy air defense systems. This procurement in FY 1988 will significantly increase the number of missiles in the inventory. In FY 1988, 2,514 HARM missiles will be produced (766 missiles for Navy and 1,748 missiles for Air Force). The \$404.9 million requested in FY 1989 will procure 1,766 HARM missiles for the Navy.

STANDARD MISSILE (SM-2 MEDIUM RANGE/EXTENDED RANGE)

	FY 1988		FY 1989	
	Qty	Amt	Qty	Amt
Procurement	1,150	\$ 583,098	1,635	\$ 816,422
Initial Spares		17,202		16,073
Procurement Cost		\$ 600,300		\$ 832,495

The STANDARD missile is a solid-propellant, tail-controlled, surface-to-air and surface-to-surface missile with mid-course and semi-active homing guidance, home-on jamming capability, and proximity and contact fusing. The SM-2 Block II Medium Range (MR) missile will be deployed on Tartar New Threat Upgrade ships, Aegis CG 47/51 cruisers, and Aegis DDG-51 destroyers. The SM-2 Block II Extended Range (ER) missile will be deployed on Terrier CG and New Threat Upgrade ships. The FY 1988 request introduces competition of the guidance, control and autopilot and the MK 104 dual thrust rocket motor. The FY 1988 request of \$583.1 million is for a total procurement of 1,150 missiles. The FY 1989 request of \$816.4 million is for a total procurement of 1,635 missiles.

RIM-116A ROLLING AIRFRAME MISSILE (RAM)

	FY 1988		FY 1989	
	Qty	Amt	Qty	Amt
Procurement	240	\$ 44,931	260	\$ 51,825
Initial Spares		627		638
Procurement Cost		\$ 45,558		\$ 52,463

The Rolling Airframe Missile (RAM) is a high-power, low-cost, lightweight, complementary self-defense system to engage anti-ship capable missiles. It has dual-mode, passive radar-frequency/infrared guidance and will be fired from two launching systems: the NATO SEASPARROW Surface Missile System (NSSMS), of which two cells of the NSSMS system will be modified to hold five (5) RAM rounds each; and a RAM stand-alone Command and Launch System that holds 21 missiles. Components of the missile will be procured competitively between a U.S. and a German prime contractor. The FY 1988 budget request of \$44.9 million will provide for 240 missiles and associated support costs; the FY 1989 budget request of \$51.8 million will provide for 260 missiles and associated support costs.

FIM-92A STINGER Missile (Multiyear Procurement)

	(\$ in Thousands)	
	FY 1988	FY 1989
	Qty	Amt
Procurement	425	\$ 21,072
Initial Spares	-	-
Procurement Cost	\$ 21,072	\$ -

STINGER is a man-portable, air defense missile system for countering low-altitude, close-range air attack against ships or combat personnel. STINGER uses a passive infrared/ultraviolet homing and guidance system that operates independently after initial aiming and launching. The STINGER system is composed of the missile, launcher, trainers and ancillary equipment. The FY 1988 request of \$21.1 million provides for the procurement of 425 STINGER Missiles, and associated production and Fleet support requirements. The request reflects cost savings under a new Army three-year multiyear contract. No request is submitted for FY 1989 since the Navy completes procurement of Stinger missiles with the FY 1988 procurement.

AGM-122A SIDEARM Missile

	(\$ in Thousands)	
	FY 1988	FY 1989
	Qty	Amt
Procurement	276	\$ 25,381
Initial Spares	101	\$ 24,982
Procurement Cost	\$ 25,482	\$ 25,491

The SIDEARM is a short-range, limited frequency-band, anti-radiation missile being developed to counter point defenses. The Marine Corps plans to use the missile primarily as a quick reaction, point and shoot weapon from the AH-1 attack helicopter. Future plans are to launch the SIDEARM from SIDEWINDER configured AV-8B, F/A-18, and OV-10D aircraft. No modifications to existing rotary and fixed wing avionics interfaces are required. The SIDEARM engineering development and procurement concept uses converted AIM-9C guidance and control section (GCS), integrated with components (motor, fuze, warhead, and safe and arm device) from current production AIM-9M SIDEWINDER missiles. There are approximately 1,000 GCS assets, currently in storage of which it is estimated that 885 will be suitable for conversion to the SIDEARM configuration. Procurement commenced in FY 1986 with an initial production of 200 missiles. The FY 1988 request of \$25.4 million is required for procurement of 276 missiles. The \$25.0 million requested in FY 1989 will procure 269 missiles.

AGM-114A HELLFIRE Missile

	(\$ in Thousands)		
	FY 1988	FY 1989	
	Qty	Amt	Qty Amt
Procurement	1,393	\$ 44,154	1,410 \$ 47,559
Initial Spares		479	909
Procurement Cost		\$ 44,633	\$ 48,468

HELLFIRE, developed by the Army, provides the Marine Corps with an extremely effective laser-guided, anti-armor weapon for use on AH-1T/J helicopters. The FY 1988 request of \$44.2 million will provide for procurement of 1,393 HELLFIRE missiles. The \$47.6 million requested in FY 1989 will procure 1,410 HELLFIRE missiles. The FY 1988 and FY 1989 procurements are required to build up the inventory of HELLFIRE missiles to satisfy Marine Corps requirements.

AGM-65E LASER MAVERICK Missile

	(\$ in Thousands)		
	FY 1988	FY 1989	
	Qty	Amt	Qty Amt
Procurement	1,099	\$ 111,807	-
Initial Spares		5,373	-
Procurement Cost		\$ 117,180	\$ 2,033

The LASER MAVERICK is a forward-fired, laser-guided missile that can be employed from land or carrier-based aircraft, and will be delivered primarily for A-4M, AV-8B, F/A-18, and A-6E Marine Corps aircrafts. It will be used for interdiction, close-air support and strike requirements against both land and sea targets. In FY 1988 \$111.8 million is requested for the final procurement of 1,099 LASER MAVERICK missiles. The FY 1988 procurement is required to continue to build up inventory levels of LASER MAVERICK to satisfy interdiction, close air support, and strike requirements.

AGM-65F IIR MAVERICK Missile (Multiyear Procurement)

	(\$ in Thousands)			
	FY 1988		FY 1989	
	Qty	Amt	Qty	Amt
Procurement	601	\$ 103,458	731	\$ 106,158
Advance Procurement		-		24,814
Initial Spares		292		581
Procurement Cost		\$ 103,750		\$ 131,553

The Imaging Infrared (IIR) MAVERICK missile has been developed as a joint service program with the Air Force as executive service. The Navy version of the weapon utilizes an IIR guidance unit optimized for ship tracking, a 300-pound penetrating blast/fragment warhead with cockpit-selectable fuzing, and a reduced-smoke rocket motor. The IIR MAVERICK missile will provide the Navy and Marine Corps with the capability to attack land and sea targets from a more survivable position below and outside of close-in air defense systems. The FY 1988 request of \$103.5 million and FY 1989 request of \$106.2 million will provide for the procurement of 601 and 731 IIR MAVERICK missiles, respectively, to continue build up inventory requirements. Failure to add the weapon to the inventory will require that attack aircraft utilize munitions with less stand-off capability that will increase the likelihood of aircraft loss. Additionally, the FY 1989 request for \$24.8 million of advance procurement funds is required to initiate a four-year multiyear procurement.

PENGUIN Missile

	(\$ in Thousands)			
	FY 1988		FY 1989	
	Qty	Amt	Qty	Amt
Procurement		\$ -	64	\$ 33,430
Advance Procurement		3,455		3,518
Initial Spares		-		674
Procurement Cost		\$ 3,455		\$ 37,622

The PENGUIN missile is an autonomous short-range, air-to-surface weapon which is controlled by an infrared, countermeasures resistant seeker that is automatically activated when the missile reaches a preset range from the predicted position of the target. The missile is planned for use on the LAMPS MK-III SH-60B helicopter as an anti ship weapon. The MK 2 Mod 7 PENGUIN missile is a modification of the surface-launched MK 2 Mod 3 missile. The FY 1988 request of \$3.5 million provides for the advance procurement of long lead time materials in support of the FY 1989 initial procurement of PENGUIN missiles. The \$36.9 million requested in FY 1989 will procure 64 PENGUIN missiles and includes \$3.5 million for advance procurement for FY 1990.

Aerial Targets

	FY 1988				FY 1989			
	Initial		Initial		Initial		Initial	
	Qty	Am't	Spares	Total	Qty	Am't	Spares	Total
AGM 37C	90	\$20,698	46	\$20,744	80	\$18,235	36	\$18,271
BQM 74C	100	22,362	77	22,439	50	11,722	60	11,782
BQM 34S		1,360		1,360				
BQM 126A								
Low Targets	1,500	18,733	454	19,187	200	71,082	1,373	72,455
All Other Targets		29,631	448	30,079	1,600	10,290	30	10,320
		\$92,804	\$1,025	\$93,829		24,301	120	24,421
						\$135,630	\$1,619	\$137,249

Aerial targets provide the representative threats needed to properly evaluate weapons systems and to provide for an effective fleet training program. The BQM 74C and the BQM 34S are both recoverable, subsonic targets that are required for both surface to air and air to air missile and gunnery exercises. The AGM 37C is a non-recoverable, supersonic target, which replicates high speed threats. In FY 1988 the AGM 37C and BQM 74C procurements, and the low targets procurements and modification program costs \$61.8 million of the total \$92.8 million. The remaining \$31.0 million finances the material costs for the conversion of 1 B6 aircraft into Q1 B6 full scale aerial targets and TALOS missiles into BQM 8X supersonic full scale targets, target auxiliary equipment required for target control and augmentation, and BQM 34S support costs. The FY 1989 request of \$135.6 million continues these procurement programs and initiates the acquisition of the BQM 126A subsonic, subscale target (200 units for \$71.1 million)

Buoys and Decoys

	(\$ in Thousands)			
	FY 1988		FY 1989	
	Qty	Am't	Qty	Am't
Procurement Cost		\$ 63,634		\$ 125,463

Analysis of the successful use of small scale, air launched decoys has resulted in an emergent requirement for these devices. Tactical decoys have been proven effective against air defenses and will significantly improve the survivability of Navy aircraft. The Tactical Air Launched Decoy is a high speed, preprogrammed tactical decoy carried from A 6 and A 7 aircraft. It provides passive and active radar cross section signature augmentation for use as a force multiplier. Remotely Piloted Vehicles (RPVs) are low speed, long endurance systems that provide intelligence, battlefield surveillance, naval/artillery gunfire support and communication relays. In FY 1988 and FY 1989, \$63.6 and \$125.5 million, respectively, finances the continued procurement of needed drones and decoys.

Other Missile Support

	(\$ in Thousands)	
	FY 1988	FY 1989
	Qty	Qty
Procurement		
Initial Spares	\$ 19,157	\$ 20,344
Procurement Cost	\$ 2,600	\$ 2,318
	\$ 21,837	\$ 30,662

The Other Missile Support program provides fleet support material for SUBROC and procures Vertical Launching System (VLS) canisters. SUBROC is an inertially guided anti submarine warfare missile with a nuclear warhead and is launched from conventional torpedo tubes. VLS is a missile launching system for surface combatants, capable of launching missiles for all warfare areas and adaptable to current and future weapons control systems. The FY 1988 request of \$19.2 million and the FY 1989 request of \$20.3 million provide fleet support material for SUBROC maintenance, testing, assembly, repair and overhaul, and procures Type 1 VLS canisters for SM 2 Missiles and Type 11 VLS canisters for Tomahawk Cruise Missiles.

Modification of Missiles

	(\$ in Thousands)	
	FY 1989 Estimate	FY 1989 Actual
	\$90,911	\$15,513
	\$12,948	\$47,789

The FY 1988 budget request for missile modification is \$15.5 million and includes funds for air-launched and surface launched missile modifications. Funds requested provide for the procurement of modification kits only. All installation costs are budgeted in the Operation and Maintenance, Navy appropriation.

FY 1988 Modification Programs (\$ in Thousands)

Air-Launched Missiles		Surface-Launched Missiles	
SIDEWINDER	\$ 773	STANDARD Missiles	\$ 3,833
PHOENIX	504	TOMAHAWK	\$ 6,458
HARPOON	3,065	TOTAL	\$10,291
TOTAL	\$5,222		

* HARPOON can also be surface-launched.

Funds for FY 1988 air-launched missile modification programs are required to improve and update the operational characteristics of SIDEWINDER, PHOENIX and HARPOON missiles. The SIDEWINDER missile modification program, budgeted at \$8 million, provides for modification of the missile airframe to improve reliability, producibility, and maintainability. The PHOENIX missile modification request of \$6 million provides for the continued retrofit of the coldwall in AIM-54A missiles. The FY 1987 HARPOON missile modification, budgeted at \$3.9 million, provides for the continued replacement with improved seekers. The STANDARD missile Medium Range and Extended Range modifications provide for improvements in operational readiness and electronic countermeasure performance in the STANDARD missiles currently deployed. The FY 1988 request includes \$3.8 million provides for the procurement of modification kits to backfit low-altitude and directional ordinance improvements on SM-1 and SM-2 Block II missiles in inventory. The TOMAHAWK missile modification, budgeted at \$6.5 million, provides for continued improvement of the guidance set flight computer that allows anti-ship TOMAHAWK missiles to operate from a wider range of launch platforms.

FY 1989 Modification Program
(\$ in Thousands)

<u>Air-Launched Missiles</u>	<u>Surface-Launched Missiles</u>
SPARROW * \$44,119	STANDARD Missiles \$27,467
SIDEWINDER 2,397	TOMAHAWK 7,179
PHOENIX 197	TOTAL \$34,646
HARPOON * 9,552	
TOTAL \$56,265	

* SPARROW and HARPOON can also be surface launched.

The FY 1989 funds required for the air-launched missile modification programs are budgeted at \$56.3 million and continue required modifications for SIDEWINDER, PHOENIX and HARPOON missiles, and initiation of the SPARROW low altitude fuze retrofit program. The STANDARD missile modification, budgeted at \$27.5 million, continues the required modifications of STANDARD MR and ER rocket motors and sustainer sections. The TOMAHAWK missile modifications, budgeted at \$7.2 million, continue to improve modifications to the guidance set flight computer and initiate signal certification device modifications.

Support Equipment and Facilities

(\$ in Thousands)
FY 1989 Estimate - \$757,432
FY 1988 Estimate - \$457,843
FY 1987 Estimate - \$148,932
FY 1986 Actual - \$ 86,650

Support Equipment and Facilities include the Weapons Industrial Facilities, the Defense Meteorological Satellite, Fleet Satellite Communications program, and Ordnance Support Equipment.

Weapons Industrial Facilities

(\$ in Thousands)		
	FY 1988	FY 1989
	Qty	Amt
Procurement Cost		
		Qty
	\$ 6,216	\$ 10,694

The FY 1988 and 1989 estimates of \$6.2 million and \$10.7 million, respectively, for missile and other ordnance producing industrial facilities include funds for capital maintenance, emergency repairs, fire protection improvements, and energy conservation. These funds provide for nonrecurring capital maintenance at government-owned missile and weapon producing industrial plants as well as emergency repairs and improvements designed to reduce fire and other safety hazards.

Defense Meteorological Satellite

(\$ in Thousands)		
	FY 1988	FY 1989
	Qty	Amt
Procurement Cost		
		Qty
	\$ 19,333	\$ 21,463

The Defense Meteorological Satellite program funds the Navy's procurement of microwave imagers. The imager has been developed and previously procured under a Joint Navy/Air Force program. The imager is a new sensor tailored for operation onboard a new series of spacecraft that will fulfill Navy data requirements for surface wind speed, precipitation intensity and identification of ice edge, ice coverage and ice age in polar areas. The request includes \$19.3 million in FY 1988 and \$21.5 million in FY 1989 for the procurement of two imagers in each year for the Navy.

Fleet Satellite Communications

	(\$ in Thousands)	
	FY 1988	FY 1989
	Qty	Amt
Procurement		
Advance Procurement		
Procurement Cost		
	\$ 213,858	\$ 98,719
	\$ 213,858	\$ 125,000
		\$ 223,719

The Fleet Satellite Communications (FLTSATCOM) system satisfies the Navy's urgent worldwide Ultra High Frequency (UHF) mobile user communication requirements. This includes protected fleet broadcast service to all Navy ships plus a vital command control service to all Anti-Submarine Warfare (ASW) platforms, Fleet Ballistic Missile (FBM) submarines, aircraft carriers, cruisers and other selected aircraft, ships and submarines. The system also satisfies the Air Force equatorial satellite communication requirements including presidential airborne command posts, Strategic Air Command and emergency mission support communications. A constellation of channelized satellites, placed in geosynchronous orbits, is used to meet Navy and Air Force UHF communications requirements. The worldwide FLTSATCOM system is fully operational and is meeting or exceeding performance requirements.

The \$213.9 million requested for FY 1988 provides for production engineering and procurement of the first of a follow-on series of satellites to replace the existing constellation at the end of its expected operational lifetime in the early 1990's. The \$223.7 million in FY 1989 will pay for acquisition of the follow-on replenishment spacecraft to be launched in the early 1990s.

Ordnance Support Equipment

	(\$ in Thousands)	
	FY 1988	FY 1989
	Qty	Amt
Procurement Cost		
	\$ 218,436	\$ 501,556

No justification materials are provided herein as a result of sensitive security classifications. Back up materials can be provided after required clearances have been cleared through the appropriate authorities.

Budget Activity 3: Torpedoes and Related Equipment

(\$ in Thousands)
FY 1989 Estimate - 970,341
FY 1988 Estimate - 634,385
FY 1987 Estimate - 606,270
FY 1986 Actual - 722,670

Purpose and Scope of Work: These funds provide for the procurement of anti-submarine/ship weapons such as torpedoes, mines and underwater targets, torpedo and mine modifications, and associated support equipment items related to production, as well as acquisition of other equipment and support necessary to maintain fleet readiness.

Justification of Funds: Of the \$634.4 million requested in FY 1988, \$564.4 million is for procurement of torpedoes and related equipment, \$16.0 million is for modification of torpedoes and related equipment, and \$54.0 million is for procurement of support equipment.

Of the \$970.3 million requested in FY 1989, \$904.7 million is for procurement of torpedoes and related equipment, \$15.5 million is for modification of torpedoes and related equipment, and \$50.1 million is for procurement of support equipment.

Torpedoes and Targets

(\$ in Thousands)
FY 1989 Estimate - 904,692
FY 1988 Estimate - 564,384
FY 1987 Estimate - 459,922
FY 1986 Actual - 558,857

Of the \$564.4 million requested in FY 1988, \$243.5 million is for procurement of 100 MK-48 ADCAP torpedoes, \$31.5 million is for procurement of 12 mobile targets, \$222.4 million is for procurement of 153 MK-50 Advanced Lightweight Torpedoes, \$9.5 million is for procurement of ASROC replacement components, and \$57.5 million is for procurement of 260 Vertical Launched ASROC weapons.

Of the \$904.7 million requested in FY 1989, \$541.8 million is for the procurement of 350 MK-48 ADCAP torpedoes, \$14.9 million is for procurement of ASROC replacement components, \$70.5 million for 340 Vertical Launch ASROC missiles (less warheads), and \$277.5 million is for procurement of 224 MK-50 Advanced Lightweight Torpedoes.

The following paragraphs provide justification for the FY 1988 and FY 1989 Torpedoes and Related Equipment request.

Torpedo MK-48 Advanced Capability (ADCAP)

	(\$ in Thousands)			
	FY 1988		FY 1989	
Procurement	Qty	Amt	Qty	Amt
Initial Spares	100	243,444	350	541,794
Procurement Cost		12,250		16,000
		255,694		557,794

Torpedo MK-48 ADCAP (Advanced Capability) was developed as an improvement to the Torpedo MK-48 to counter enemy submarine threats through the 1990's. The improvements in the guidance and control systems will allow the ADCAP torpedo to operate against targets with reduced sonar target strength and targets which present a low doppler profile and improvements in the propulsion system will allow the torpedo to go faster, deeper and farther than the current MK-48 torpedo. These improvements will allow the ADCAP torpedo to operate in adverse environments such as shallow water, high sea conditions, strong thermal gradients and under ice. FY 1988 and FY 1989 provide for procurement of 100 and 350 ADCAP torpedoes, respectively, production support equipment, production support and continuation of competition for the Afterbody/Tailcone (second source).

Torpedo MK-50 Advanced Lightweight Torpedo

	(\$ in Thousands)			
	FY 1988		FY 1989	
Procurement	Qty	Amt	Qty	Amt
Initial	153	222,402	224	277,551
Procurement		4,420		15,172
		226,822		292,723

\$222.4 million is requested in FY 88 for 153 ALWT weapons with follow-on procurement in FY 1989 of 224 units for a total of \$277.6 million. ALWT will provide an ASW torpedo for the surface and ASW air weapon systems, providing an underwater submarine destination capability to meet the Navy's needs in the late 1980's and 1990's period. ALWT will provide a replacement for the existing Torpedo MK-46 currently in the Navy inventory.

Mobile Target MK-30

	(\$ in Thousands)		
	FY 1988	FY 1989	
Procurement	Qty	Amt	Qty
Initial Spares	12	\$31,495	Amt
Procurement Cost	12	\$31,495	

The MK 30 Mobile Target provides air, surface and submarine ASW units with the means to conduct realistic exercise firings on three-dimensional underwater ranges. This target provides the basic training capability to exercise surface ship and submarine sonars, actively and passively fired torpedoes, and aircraft equipped with sonobuoys and Magnetic Anomaly Detection (MAD) gear. The procurement of targets in FY 1988 continues the build up of assets to support achievement of 2,400 MK-30 in-water runs per year at four underwater sites.

ASROC Component Replacement

	(\$ in Thousands)		
	FY 1988	FY 1989	
Procurement	Qty	Amt	Qty
Initial Spares	-	\$9,522	Amt
Procurement Cost	-	\$9,522	\$14,886
			\$14,886

The ASROC (Anti-Submarine Rocket) is a weapon system designed around a range-controlled, unguided rocket missile which carries a torpedo or a depth charge as a payload. ASROC is utilized by most surface combatants to defend against high performance enemy submarines. The FY 1988 and FY 1989 requests provide for procurement of ASROC components to replace those that were expended during fleet training exercises. The principal element of cost in FY 1988 and FY 1989 is the continued procurement of rocket motor and Ignition Separation Assemblies (MK-4 ISA). The ISAs are being procured in a new design which makes them safe from the hazards of accidental detonation caused by shipboard electromagnetic equipment (designated HERO: Hazards of Electromagnetic Radiation to Ordnance). Procurement of the HERO-safe MK-4 ISA is required in order to replenish inventories of the older non-HERO safe MK-3 ISAs depleted by training losses and will eventually replace the entire inventory of the older components.

Vertical Launch ASROC

	(\$ in Thousands)		
	FY 1988	FY 1989	
Procurement	Qty	Amt	Amt
Initial Spares	260	57,521	70,461
Procurement Cost		340	3,400
		57,861	73,861

Vertical Launch ASROC is a replacement system for the older ASROC weapon system. It will provide a vertically launched weapon to a greater distance with equal accuracy utilizing the latest torpedo/depth charge configuration. The FY 1988 request is for procurement of a limited initial quantity of 260 units with a follow-on in FY 1989 of 340 units.

Modification of Torpedoes and Related Equipment

(\$ in Thousands)	
FY 1989 Estimate	- \$ 15,547
FY 1988 Estimate	- \$ 16,015
FY 1987 Estimate	- \$ 97,685
FY 1986 Actual	- \$102,901

The \$16.0 million in FY 1988 and the 15.5 million in FY 1989 are requested to fund the following modification programs.

	(\$ in Thousands)	
	FY 1988	FY 1989
Mobile Mine MK 67 (SLMM)	2,858	1,325
CAPTOR Mods	11,825	12,275
Swimmer Weapon System	1,332	1,947

Mobile Mine MK 67 (SLMM)

	(\$ in Thousands)	
	FY 1988	FY 1989
Procurement	2,858	1,325
Initial Spares	1,436	0
Procurement Cost	4,304	1,325

\$2.9 million is requested in FY 1988 and 1.3 million is requested in FY 1989 in order to support production of SLMM mines.

CAPTOR Mods

\$11.8 million is requested in FY 1988 and \$12.3 million is requested in FY 1989 in order to support procurement of modifications for MK-60 CAPTOR mines currently in the fleet. These modifications will update the older mines to the latest approved production baseline configuration.

Swimmer Weapon System

Procurement		(\$ in Thousands)
Initial Spares	FY 1988	FY 1989
Procurement Cost	1,332	1,947
	62	120
	1,394	2,067

\$1.3 million is requested in FY 1988 and \$1.9 million is requested in FY 1989 in order to provide for continued procurement of unique weapons and equipment required by the Navy Special Warfare Groups One and Two (SEAL teams) to carry out beach clearance, underwater and direct action missions. Currently, there are eight SEAL teams deployed within the Fleet. The major special warfare system is the stand-off weapon assembly MK-32 which is comprised of the stand-off weapon MK-31 and weapon control system MK-5.

Support Equipment

	(\$ in Thousands)
FY 1989 Estimate	- \$50,102
FY 1988 Estimate	- \$53,986
FY 1987 Estimate	- \$48,663
FY 1986 Actual	- \$60,912

Of the \$54.0 million requested in FY 1988, \$33.4 million is for Torpedo Support Equipment, and \$20.6 million is for ASW Range Support.

Of the \$50.1 million requested in FY 1989, \$27.6 million is for Torpedo Support Equipment, and \$22.5 million is for ASW Range Support.

Torpedo Support Equipment

Procurement		(\$ in Thousands)
Initial Spares	FY 1988	FY 1989
Procurement Cost	33,348	27,555
	-	-
	33,348	27,555

The line item provides the fleet with the components necessary to restore weapons used to conduct training exercises (which involves actually firing the torpedoes) back to a ready-for-issue warshot status. Thus this request supports combat-ready deployment of anti-submarine warfare forces. The funds requested provide for procurement of components expended during torpedo firings such as batteries, pressure cylinders, propellant assemblies and various air-launch accessories; equipment and components worn out or lost during repeated service such as exercise heads and fuel tanks; and production support efforts associated with the above procurements. Procurement quantities of these items vary each year and are dependent upon fleet training requirements and the tempo of operations. The FY 1988 and FY 1989 resources procure the material required to support fleet training exercises and operational inventories for the MK-46, MK-48/MK-48 ADCAP Torpedoes and exercise turnaround kits of the MK-50 Advanced Lightweight Torpedoes.

ASW Range Support

	(\$ in Thousands)	
	FY 1988	FY 1989
Procurement	20,638	22,547
Initial Spares	742	780
Procurement Cost	21,380	23,327

The Anti-Submarine Warfare Range Support Program provides for the procurement of range proofing and fleet support equipments required for use on the Navy's underwater ranges and for the fixed costs of on-range proofing services. This includes the procurement of pingers, transponders, MK-30 and MK-27 Target exercise components and other related items. This line item supports Fleet exercises and torpedo firings and provides equipment for ASW readiness assessment.

Budget Activity 4: Other Weapons

(\$ in Thousands)
FY 1989 Estimate - \$103,669
FY 1988 Estimate - \$101,540
FY 1987 Estimate - \$186,721
FY 1986 Actual - \$205,674

Purpose and Scope of Work

These funds provide for the procurement of guns and gun mounts for U.S. Navy and Coast Guard Ships. This budget activity also provides for the associated modifications and support equipment.

Justification of Funds

Of the \$101.5 million requested in FY 1988, \$42.8 million is for 5 Close-In Weapon Systems, 64 MK-19 Mod 3 40MM Machine Guns, 22 25MM Gun Mounts, and Small Arms and Weapons, \$57.6 million is for Gun and Gun Mount modification and \$1.1 million is for support equipment.

Of the \$103.6 million requested in FY 1989, \$33.9 million is for 5 Close-In Weapon Systems, 25 MK-19 Mod 3 40MM Machine Guns, 22 25MM Gun Mounts, and Small Arms and Weapons, \$68.9 million is for Gun and Gun Mount modification and \$.8 million is for support equipment.

The following paragraphs provide justification for Other Weapons. Initial spare parts amounts are included for information under each weapon system, but are separately justified in Budget Activity 5.

Guns and Gun Mounts

(\$ in Thousands)
FY 1989 Estimate - \$ 33,915
FY 1988 Estimate - \$ 42,883
FY 1987 Estimate - \$130,543
FY 1986 Actual - \$159,080

Of the \$42.9 million requested for Guns and Gun Mounts in FY 1988, \$28.0 million is for 5 MK-15 Close-In Weapon Systems, \$1.2 million is for 64 MK-19 Mod 3 40MM Machine Guns, \$4.1 million is for 22 25MM Gun Mounts, and \$9.6 million is for Small Arms and Weapons.

Of the \$33.9 million requested for Guns and Gun Mounts in FY 1987, \$19.3 million is for 5 MK-15 Close-In Weapons Systems, \$1.5 million is for 25 MK-19 Mod 3 40MM Machine Guns, \$4.3 million is for 22 25MM Gun Mounts, and \$9.8 million is for Small Arms and Weapons.

MK-15 Close-In Weapon System (PHALANX)

	(\$ in thousands)	
	FY 1988	FY 1989
	Qty	Amt
Procurement	5	\$ 28,023
Initial Spares		1,625
Procurement Cost		\$ 29,648
		\$ 20,434

The MK-15 Close-In Weapon System (CIWS), or PHALANX, is a fast reaction, terminal defense against low flying aircraft and anti-ship missiles penetrating other Fleet defensive weapon envelopes. The system is an automatic self-contained unit consisting of search and track radar, a digital fire control system and a 20mm M61A1 gun which automatically detects, evaluates, tracks, engages, assesses kill and returns to search mode. The system will be installed in over 300 ships, both new construction and retrofit. The requests of \$28.0 million in FY 1988 and \$19.3 million in FY 1989 provide for the procurement of 5 systems in FY 1988 and 5 in FY 1989 from two production sources.

MK-19 40mm Machine Gun

	(\$ in thousands)	
	FY 1988	FY 1989
	Qty	Amt
Procurement	64	\$ 1,201
Initial Spares		0
Procurement Cost		\$ 1,201
		\$ 492

The MK-19 Mod 3 40mm machine gun provides a more effective, safe and reliable 40mm grenade firing weapon for arming ships and crafts. The MK-19 Mod 3 is planned as an initial issue and replacement weapon for the Navy's present inventory of MK-19 40mm machine guns, and is presently issued to a variety of Navy ships and special forces. The FY 1988 request of \$1.2 million for the procurement of 64 MK-19 Mod 3 40mm machine guns includes new requirements for the SEAFOX craft and construction battalions. The FY 1989 request of \$.5 million is for the procurement of 25 MK-19 machine guns.

25MM MK-38 Gun System

(\$ in Thousands)		
	FY 1988	FY 1989
Procurement	Qty <u>22</u>	Qty <u>22</u>
Initial Spares	Amt <u>4,091</u>	Amt <u>4,318</u>
Procurement Cost	<u>120</u>	<u>136</u>
	<u>4,211</u>	<u>4,454</u>

The 25MM MK-38 Gun System, a single barrel 25MM M242 automatic gun on the manually operated MK-88 deck mount, is the planned replacement weapon for the 20MM M-16 Machine Gun, and serves a short-range defensive and offensive armament for ships and craft. The requests for \$4.1 million in FY 1988 and \$4.3 million in FY 1989 provide for the procurement of 22 25MM MK-38 Gun Systems in each fiscal year.

Small Arms and Weapons

(\$ in Thousands)		
	FY 1988	FY 1989
Procurement	Qty <u>0</u>	Qty <u>0</u>
Initial Spares	Amt <u>9,568</u>	Amt <u>9,760</u>
Procurement Cost	<u>0</u>	<u>0</u>
	<u>9,568</u>	<u>9,760</u>

The requests for \$9.6 million in FY 1988 and \$9.8 million in FY 1989 for Small Arms and Weapons support the procurement, modernization, standardization and stock replenishment of a wide variety of small arms and weapons, gun mounts and associated support components. The 9MM pistol is procured in this line. Procurements of small arms and weapons support security training, 2,676 ships and ashore activities, mobile Construction Battalions, Special Warfare Units, and crisis response teams to counter world-wide terrorist threats.

Modification of Guns and Gun Mounts

(\$ in Thousands)	
FY 1989 Estimate	- \$68,920
FY 1988 Estimate	- \$57,589
FY 1987 Estimate	- \$55,334
FY 1986 Actual	- \$45,578

Of the \$57.6 million requested for modification of guns and gun mounts in FY 1988, \$45.2 million is for MK-15 Close-In Weapon System modification, \$6.4 million is for 5"/54 Gun Mount modification. \$0.3 million is for 3"/50 Gun Mount modification, \$4.0 million is for MK-75/75MM Gun Mount modification, and \$1.7 million is for modifications under \$2,000,000.

Of the \$68.9 million requested for modification of guns and gun mounts in FY 1989, \$54.6 million is for MX-15 Close-In Weapon System modification, \$8.4 million is for 5"/54 Gun Mount modification, \$4.1 million is for MX-75/76MM Gun Mount modification, \$3.2 million is for 3"/50 Gun Mount modification, and \$1.6 million is for Modifications under \$2,000,000.

MX-15 Close-In Weapons System (PWALANX) Modification

	(\$ in Thousands)	
	FY 1988	FY 1989
Procurement	Qty	Qty
Initial Spares	Ant	Ant
Procurement Cost	45,186	54,575
	0	0
	45,186	54,575

The requests for \$45.2 million in FY 1988 and \$54.6 million in FY 1989 are for improvements to the Close-In Weapon System which will result in increased magazine capacity, increased search elevation angle and adaptive firing rate. Reliability and maintainability improvements are also included. Improvements are backfit onto MX-15 Close-In Weapon Systems procured prior to FY 1985 as well as 1162 trainers. Systems procured subsequent to FY 1985 incorporate these improvements in production.

5"/54 Gun Mount Modifications

	(\$ in Thousands)	
	FY 1988	FY 1989
Procurement	Qty	Qty
Initial Spares	Ant	Ant
Procurement Cost	6,414	8,800
	2,414	2,597
	8,828	11,397

The requests for \$6.4 million in FY 1988 and \$8.4 million in FY 1989 procure hardware to correct deficiencies, improve operability, reliability, maintainability and availability of all in-service 5"/54 Gun Mounts.

3"/50 Gun Mount Modification

(\$ in Thousands)		
	FY 1988	FY 1989
Qty		
	Amt	Qty
	275	
	0	
	275	
		Amt
		259
		0
		259

The requests for \$0.3 million in FY 1988 and \$0.2 million in FY 1989 procure hardware to correct deficiencies, improve operability, reliability, maintainability and availability of all in-service 3"/50 Gun Mounts.

MK-75/7600 Gun Mount Modifications

(\$ in Thousands)		
	FY 1988	FY 1989
Qty		
	Amt	Qty
	4,050	
	343	
	4,403	
		Amt
		4,076
		376
		4,452

The requests for \$4.1 million in FY 1988 and \$4.1 million in FY 1989 procure hardware to correct deficiencies, improve safety, operability, reliability, survivability, and counter the effects of shock and vibration for all in-service MK-75/7600 Gun Mounts.

Modifications Under \$2,000,000

(\$ in Thousands)		
	FY 1988	FY 1989
Qty		
	Amt	Qty
	1,654	
	0	
	1,654	
		Amt
		1,610
		0
		1,610

The requests of \$1.7 million in FY 1988 and \$1.6 million in FY 1989 procure hardware to improve the safety, reliability, and maintainability of in-service 16"/50 and 5"/38 gun systems and other minor caliber ordnance.

Support Equipment

(\$ in Thousands)
FY 1989 Estimate - \$ 834
FY 1988 Estimate - \$1,068
FY 1987 Estimate - \$ 844
FY 1986 Actual - \$1,016

The requests of \$1.1 million in FY 1988 and \$0.8 million in FY 1989 procure a wide variety of ordnance and support equipment for Surface Gun Systems.

Gun Support Equipment

	(\$ in Thousands)	
	FY 1988	FY 1989
	Qty	Qty
Procurement	Amt	Amt
Initial Spares	1,068	834
Procurement Cost	0	0
	1,068	834

The requests of \$1.1 million in FY 1988 and \$0.8 in FY 1989 procure training aids for Special Warfare Units and industrial personnel, match grade small arms, and saluting mounts.

Budget Activity 5 - Spares and Repair Parts

(\$ In Thousands)	
FY 1989 Estimate	- \$143,727
FY 1988 Estimate	- \$129,728
FY 1987 Estimate	- \$145,777
FY 1986 Actual	- \$148,171

Purpose and Scope of Work: These funds provide for the procurement of spares and repair parts for all equipments, weapon systems and support equipment procured under the Weapons Procurement, Navy (WPN) appropriation which require support by the Hardware Systems Command prior to the Navy Supply System Material Support Date (MSD).

Justification of Funds: Of the \$129.7 million requested in FY 1988, \$109.6 million is for Initial spares and \$20.1 million is for Replenishment spares.

Of the \$143.7 million requested in FY 1989, \$125.0 million is for Initial spares and \$18.7 million is for Replenishment spares.

The following paragraphs provide the justification for each program.

Initial Spares

(\$ in Thousands)	
FY 1988	\$109,606
FY 1989	\$125,039

The requested funding provides for the procurement of initial spares and repair parts to support missile, ASW and other weapon/support equipment procured in this appropriation. Requirements for Navy Initial spares procurement are determined by detailed provisioning procedures that consider a wide range of factors including the use of the end item, usage rate trends, engineering judgement and repairable item turnaround time.

Replenishment Spares

(\$ in Thousands)	
FY 1988	\$20,122
FY 1989	\$18,688

The requested funding provides for the procurement of replenishment spares and repair parts requirements utilizing a stratification technique which considers the number of equipments/weapon systems installed in the Fleet, repair part usage data, Ready-For-Issue (RFI) spares returning from rework/repair programs and equipment leadtimes to derive net fiscal year budget requirements.

Comparison of FY 1987 Program Requirements as Reflected
In FY 1987 Budget With FY 1987 Program Requirements as
Shown in FY 1988/89 Budget

Summary of Requirements (In Thousands of Dollars)

	Total Program Requirements Per FY 1987 Budget	Program Requirements Per FY 1988/89 Budget	Increase (+) or Decrease (-)
Ballistic Missiles	1,437,037	1,359,073	-77,964
Other Missiles	3,343,063	2,968,006	-375,057
Torpedoes and Related Equipment	971,364	606,270	-365,094
Other Weapons	193,202	186,721	-6,481
Shares and Repair Parts	150,734	145,777	-4,957
Reimbursable Program	31,000	31,000	
Total Fiscal Year Program	6,126,400	5,296,847	-829,553

Explanation by Budget Activity

1. Ballistic Missiles (\$-77,964)

The net decrease results from specified Congressional reductions (\$-62,000) and inflation (\$-18,351) and revised profit policy (\$-8,156) reductions assessed against all budget activity programs, offset by minor reprogramings (\$+10,543).

2. Other Missiles (\$-375,057)

The net decrease results from specified Congressional reductions (\$-326,158), inflation (\$-40,264) and revised profit policy (\$-17,895) reductions, offset by minor reprogramings (\$+9,260).

Explanation by Budget Activity

3. Torpedoes and Related Equipment (\$-365,094)

The net decrease is the result of specified Congressional reductions (\$-312,395), inflation (\$-8,795) and profit policy (\$-3,909) reductions, a DD 1415 reprogramming action for the MX-48 ADCAP to RDT&E, N (\$-25,000), offset by minor reprogrammings (\$+14,995).

4. Other Weapons (\$-6,481)

The net decrease is the result of inflation (\$-2,578) and profit policy (\$-1,146) reductions, offset by minor reprogrammings (\$-2,757).

5. Spare and Repair Parts (\$-4,957)

The net decrease is the result of inflation (\$-2,012) and profit policy (\$-894) reductions, offset by minor reprogrammings (\$-2,051).

Comparison of FY 1987 Financing As Reflected
In FY 1987 Budget With FY 1987 Financing As
Shown in FY 1988/89 Budget

(In Thousands of Dollars)

	Financing Per FY 1987 Budget	Financing Per FY 1988/89 Budget	Increase (+) or Decrease (-)
Program Requirements (Total)	6,126,400	5,296,847	-829,553
Program Requirements (Service Account)	6,095,400	5,265,847	-829,553
Program Requirements (Reimbursable)	31,000	31,000	-
Less:			
Anticipated Reimbursements			
Reprogramming from prior year budget plans	31,000	31,000	-
Unobligated balance available from prior year to finance new budget plans			
Transferred from other accounts			
Add:			
Unobligated balance available to finance subsequent year budget plans			
Appropriation	6,095,400	5,290,847	-854,553
Transferred to other accounts	-	-25,000	-25,000
Appropriation (Adjusted)	6,095,400	5,265,847	-829,553

Explanation of Changes in Financing

The FY 1987 DOD Appropriations Act reduced the FY 1987 President's Budget request by \$804,553. A DD 1415 for the RDT&E, N, MK-48 ADCAP torpedo for \$25,000 is reflected in the FY 1987 column of the FY 1988/89 President's Budget request.

Comparison of FY 1986 Program Requirements as Reflected
In FY 1987 Budget With FY 1986 Program Requirements as
Shown in FY 1988/89 Budget

Summary of Requirements (In Thousands of Dollars)

	Total Program Requirements Per FY 1987 Budget	Program Requirements Per FY 1988/89 Budget	Increase (+) or Decrease (-)
Ballistic Missiles	602,560	547,940	-54,620
Other Missiles	3,455,859	3,131,983	-323,876
Torpedoes and Related Equipment	782,732	722,670	-60,062
Other Weapons	223,447	205,674	-17,773
Shares and Repair Parts	151,497	148,171	-3,326
Reimbursable Program	30,000	27,491	-2,509
Total Fiscal Year Program	5,246,095	4,783,929	-462,166

Explanation by Budget Activity

1. Ballistic Missiles (\$-54,620)

The decrease results from the application of Congressional Gramm-Rudman-Hollings (\$-29,526) and undistributed inflation recisions (\$-17,694), and DD 1415 reprogramming actions (Poseidon, \$-1,300; Trident I, \$-6,100; Astronautics, \$-1,000) for Contra Aid and a classified Defense Nuclear Agency reprogramming (Astronautics, \$-4,000), offset by minor reprogrammings (\$+5,000).

2. Other Missiles (\$-323,876)

The decrease results from the application of Congressional Gramm-Rudman-Hollings (\$-169,909) and undistributed inflation recisions (\$-67,445) reductions; Congressional recisions to the Tomahawk (\$-30,800) and Standard Missile (SM-2) (\$-31 100) programs; reprogramming actions for Contra Aid (\$-6,300) and a classified Defense Nuclear Agency action (\$-11,400); offset by a denied reprogramming (\$+11,700) and other minor reprogramming actions netting (\$-18,622), including a reduction in program requirements to the Harpoon program (\$-7,480).

3. Torpedoes and Related Equipment (\$-60,062)

The decrease results from the application of Congressional Gramm-Rudman-Hollings (\$-38,353) reductions, inflation recisions (\$-26,264), offset by minor reprogramings (\$+4,555).

4. Other Weapons (\$-17,773)

The decrease results from the application of Congressional Gramm-Rudman-Hollings (\$-10,947) reductions, inflation recisions (\$-7,103), offset by minor reprogramings (\$+277).

5. Spares and Repair Parts (\$-3,326)

The decrease results from the application of Congressional Gramm-Rudman-Hollings (\$-7,422) reductions and inflation recisions (\$-4,716), offset by minor reprogramings to initial spares (\$+8,812).

Comparison of FY 1986 Financing As Reflected
In FY 1987 Budget With FY 1986 Financing As
Shown in FY 1988/89 Budget

(In Thousands of Dollars)

	Financing per FY 1987 Budget	Financing per FY 1988 Budget	Increase (+) or Decrease (-)
Program Requirements (Total)	5,246,095	4,783,929	-462,166
Program Requirements (Service Account)	5,216,095	4,756,438	-459,657
Program Requirements (Reimbursable)	30,000	27,491	-2,509
Less:			
Anticipated Reimbursements	30,000	27,491	-2,509
Reprogramming from prior year budget plans			
Unobligated balance available from prior			
year to finance new budget plans			
Transferred from other accounts			-
Unobligated balance rescinded			-
Add:			
Unobligated balance available to finance		215,200	+215,200
subsequent year budget plans			
Appropriation (Adjusted)	5,216,095	4,971,638	-244,457

Explanation of Changes in Financing

The net decrease in program requirements reflects rescissions applied by the FY 1987 DOD Appropriations Act (\$-30,800 from Tomahawk; \$-31,100 from SM-2; and \$-123,200 for undistributed inflation rescissions) and Gramm-Rudman-Hollings (\$-256,157) reductions. Additionally, reprogramming actions for Contra Aid (\$14,700) and the Defense Nuclear Agency (\$-15,400) are included, offset by a denied reprogramming (\$+11,700). The adjustment for reimbursables reflects an anticipated \$2,509 decrease in reimbursable orders.